

NEET ULTIMATE

CRASH COURSE 2025

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Botany

Cell Cycle and Cell Division

Lecture No- 03

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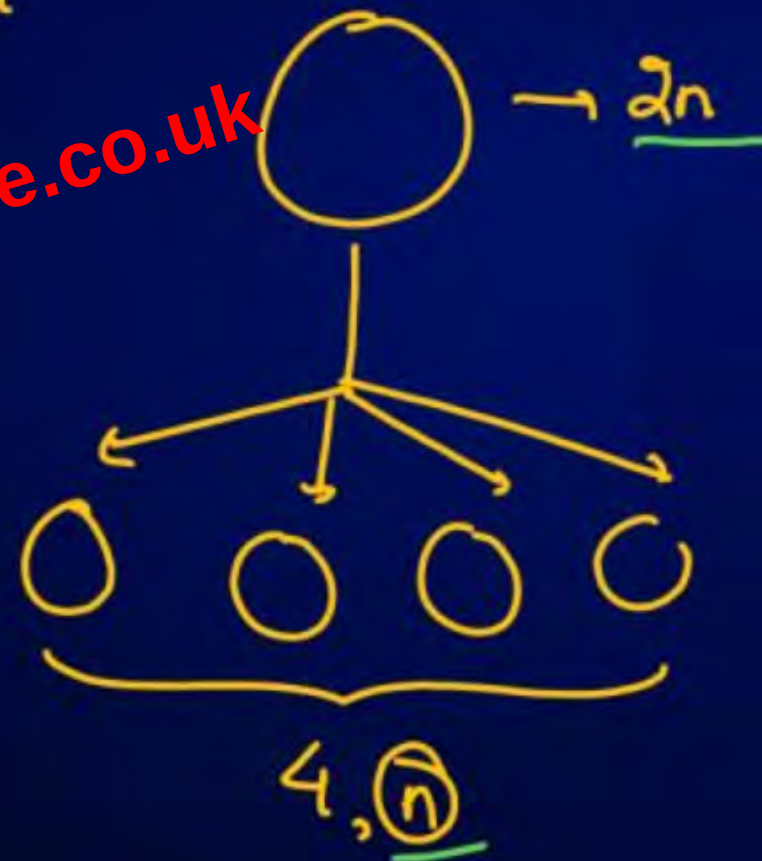


Meiosis → Reductional cell division

→ A diploid parent cell during meiosis produces four haploid non-identical daughter cell

→ Only in diploid cell

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↳ During meiosis there are 2 rounds of nuclear division but DNA replication occurs once

Diploid cell:-



Interphase



meiosis I
KI
PI

$= 2C$
 $= 2n$

$= C$ (amt of DNA)
 $= 2n$ (no of chromosome)

Prophase-I → longest & complex phase

- ↳ Leptotene
- ↳ Zygotene
- ↳ Pachytene
- ↳ Diplotene
- ↳ Diakinesis

Significance of meiosis → (2) It introduces variations leads to evolution.

(1) $(2n)$ $\xrightarrow{\text{meiosis}}$ haploid (n)

↳ Alternation of generation by switching from diploid to haploid phase. It is very imp. for sexually reproducing organisms. for gametogenesis

$2n \xrightarrow{\text{Meiosis}} n$
 $\xleftarrow{\text{fertilization}}$